

AMENDMENTS TO CLAIMS

1 (currently amended). ~~An electronic circuit (100) for operating a high-pressure lamp (120) in an ignition mode and a normal operational mode, comprising~~
~~— a DC-AC converter comprising a first and a second half bridge (110-1, 110-2) which are connected in parallel between an operating potential (+) and a reference potential (-) for providing a suitable alternating current to the high-pressure lamp (120) in the two said operating modes; and~~
~~— a series arrangement comprising a first coil (L1), followed by the high-pressure lamp (120), again followed by a second coil (L2), while the connection terminal of the first coil (L1) not connected to the high-pressure lamp (120) is connected to the output (112-1) of the first half bridge (110-1), and the connection terminal of the second coil (L2) not connected to the high-pressure lamp (120) is connected to the output (112-2) of the second half bridge (110-2), said outputs being each formed by a central tap of a half bridge~~

The electronic circuit as set forth in claim 12 wherein the first filter includes a first coil coupled to the output of the first half bridge and the resonant circuit includes a second coil coupled to the output of the second half bridge;
characterized by

~~a first capacitor (C1) which is connected in the path from the junction point of the first coil (L1) and the high-pressure lamp (120) either to coupled between the first coil and either the reference potential (-) or [[to]] the operating potential (+);~~
and

~~a second capacitor (C2) which is connected in the path from the junction point of the high-pressure lamp (120) and the second coil (L2) either to coupled between the second coil and either the reference potential (-) or [[to]] the operating potential (+) or in parallel to the high-pressure lamp (120).~~

2 (original). A circuit as claimed in claim 1, characterized in that a third capacitor (C3) is connected between the output (112-1) of the first half bridge (110-1) and either the operating potential (+) or the reference potential (-).

3 (original). A circuit as claimed in claim 1, characterized in that a third capacitor (C3) is connected between the output (112-1) of the first half bridge (110-1) and the reference potential (-), and in that a fourth capacitor (C4) is connected between the operating potential (+) and the output (112-1) of the first half bridge (110-1).

4 (original). A circuit as claimed in claim 1, characterized in that a fifth capacitor (C5) is connected between the output of the second half bridge (112-2) and the operating potential (+), and/or in that a sixth capacitor (C6) is connected between the reference potential (-) and the output (112-2) of the second half bridge (110-2).

5 (currently amended). A circuit as claimed in claim 1, characterized by wherein said second means includes:

a sensor device (130) for generating a current-sensor signal which represents the value of the current through the first coil (L1); and ~~[[by]]~~

a comparator device (140) for comparing the value represented by the current-sensor signal with a given reference current value I_R and for generating at least one control signal for controlling the level of the current through the first coil (L1) and through the high-pressure lamp (120) to the given reference current value I_R through a suitable variation of the duty cycles of the switching elements (T1, T2) of the first half bridge (110-1).

6 (currently amended). A circuit as claimed in claim 5, characterized in that the sensor device (130) ~~is constructed as~~ includes a magnetoresistive sensor.

7 (currently amended). A circuit as claimed in claim 5, characterized by a delay device (150) for delaying the control signal for controlling the switching elements (T1, T2) of the first half bridge (110-1) by a given delay time with respect to the moment when it is detected that the level exceeds the reference value I_R in upward or downward direction, which delay time is defined such that at least a desired critical damping establishes itself in ~~[[a]]~~ the filter comprising formed by the second coil (L2) and the first capacitor (C1), and that the current through the first coil (L1)

changes its sign at least twice during a switching cycle of the switching elements (T1, T2) of the first half bridge.

8 (currently amended). A method of operating a high-pressure lamp (120) with a circuit as claimed in claim 12, ~~characterized in that and further including the step of:~~

~~the first coil (L1) and the first capacitor (C1) together form a filter for filtering out at least substantially the AC component from the current flowing through the high-pressure lamp (120), which~~

~~the filter is supplied with a voltage provided by the first half bridge (110-1), whose frequency lies above the resonance frequency f_{R1} of the filter (L1, C1); and in that~~

~~the second coil (L2) and the second capacitor (C2) together form a resonant circuit which in the ignition mode is supplied with a voltage provided by operating the second half bridge (110-2), whose frequency corresponds to the resonance at a frequency corresponding to the resonant frequency f_{R2} of the resonant circuit (L2, C2) or to an odd fraction thereof, so as to generate an ignition voltage necessary for igniting the high-pressure lamp (120).~~

9 (currently amended). A method as claimed in claim 8, characterized in that

~~the ignition mode step of operating the second half bridge is maintained for at least one second, and, in that immediately after that, a switch is made to another the normal operational mode.~~

10 (currently amended). A method as claimed in claim 9, ~~characterized in that further including the step of:~~

~~after ignition of the high-pressure lamp (120) reducing the switching frequency of the second half bridge (110-2), and thus the frequency of the current through the high-pressure lamp (120), after ignition of the high-pressure lamp is reduced.~~

11 (currently amended). A method as claimed in claim 8, ~~characterized in that further including the step of:~~

operating the switching elements (T1, T2, T3, T4) of the first half bridge (110–1) and/or the second half bridge (110–2) ~~are operated by~~ in accordance with the principle of voltageless switching.

12 (new). In electronic circuit for operating a high-pressure lamp in at least two modes, a first half bridge and a second half bridge connected in parallel between an operating potential and a reference potential, a filter coupled to the output of the first half bridge circuit, a resonant circuit coupled to the output of the second half bridge circuit, wherein the lamp can be coupled between the filter and the resonant circuit, and a first means for operating the second half bridge, the improvement comprising:

second means for operating the first half bridge, whereby the first half bridge and the second half bridge operate independently of each other.

13 (new). The electronic circuit as set forth in claim 12 wherein said first half bridge includes two switches connected in series, wherein a first switch conducts and a second switch is non-conducting at zero current from the output of the first half bridge during a first mode of operation.

14 (new). The electronic circuit as set forth in claim 12 wherein said means operates the first half bridge at a higher frequency than the operating frequency of the second half bridge during a second mode of operation.